

1 **CLAIMS**

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3 1. A data communication system configured to communicatively link a

4 host device and a client device with a point-to-point data communication link, the

5 host device and the client device each configured for multipoint data

6 communication over a distributed network, the data communication system

7 comprising:

8 a data communication interface driver configured to communicatively link

9 with a data communication interface of the host device via the point-to-point data

10 communication link;

11 a virtual driver component configured to communicate with the data

12 communication interface driver and the client device; and

13 a virtual network configured to communicatively link the data

14 communication interface driver and the virtual driver component.

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16 2. A data communication system as recited in claim 1, wherein the data

17 communication interface driver is a Remote Network Driver Interface

18 Specification (NDIS) driver and the data communication interface is a Remote

19 NDIS component configured to communicate with the Remote NDIS driver via

20 the point-to-point data communication link.

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1           3.    A data communication system as recited in claim 1, wherein the data  
2 communication interface driver is a Remote Network Driver Interface  
3 Specification (NDIS) driver and the data communication interface is a Remote  
4 NDIS component configured to communicate Remote NDIS messages with the  
5 Remote NDIS driver via the point-to-point data communication link.

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7           4.    A data communication system as recited in claim 1, wherein the  
8 virtual network is a local area network.

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10          5.    A data communication system as recited in claim 1, wherein the data  
11 communication interface driver is a Remote Network Driver Interface  
12 Specification (NDIS) driver configured to communicate with the virtual driver  
13 component via the virtual network.

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15          6.    A data communication system as recited in claim 1, wherein the data  
16 communication interface driver is a Remote Network Driver Interface  
17 Specification (NDIS) driver configured to communicate Remote NDIS messages  
18 with the virtual driver component via the virtual network.

1           7. A data communication system as recited in claim 1, wherein the data  
2 communication interface driver is a Remote Network Driver Interface  
3 Specification (NDIS) driver and the data communication interface is a Remote  
4 NDIS component configured to communicate with the Remote NDIS driver via  
5 the point-to-point data communication link, and the Remote NDIS driver is  
6 configured to communicate with the virtual driver component via the virtual  
7 network.

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9           8. A data communication system as recited in claim 1, wherein the data  
10 communication interface driver is a Remote Network Driver Interface  
11 Specification (NDIS) driver and the data communication interface is a Remote  
12 NDIS component configured to communicate Remote NDIS messages with the  
13 Remote NDIS driver via the point-to-point data communication link, and the  
14 Remote NDIS driver is configured to communicate the Remote NDIS messages  
15 with the virtual driver component via the virtual network.

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17           9. A data communication system as recited in claim 1, further  
18 comprising a connection interface configured to couple the point-to-point data  
19 communication link with the client device.

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21           10. A data communication system as recited in claim 1, further  
22 comprising a Universal Serial Bus data communication interface configured to  
23 couple the point-to-point data communication link with the client device.  
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1       **11.** A data communication system as recited in claim 1, further  
2 comprising a 1394 bus data communication interface configured to couple the  
3 point-to-point data communication link with the client device.  
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5       **12.** A data communication system as recited in claim 1, further  
6 comprising a wireless data communication interface configured to couple the  
7 point-to-point data communication link with the client device.  
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9       **13.** A data communication system as recited in claim 1, further  
10 comprising a Bluetooth data communication interface configured to couple the  
11 point-to-point data communication link with the client device.  
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13       **14.** A data communication system as recited in claim 1, further  
14 comprising an infrared data communication interface configured to couple the  
15 point-to-point data communication link with the client device.  
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1           **15.**    A data communication system configured to communicatively link  
2 computing devices with a point-to-point data communication link, the data  
3 communication system comprising:

4           one or more multipoint network data communication components designed  
5 for data communication over a distributed network;

6           a connection interface configured to couple the one or more multipoint  
7 network data communication components with a remote computing device; and

8           wherein the one or more multipoint network data communication  
9 components are configured for point-to-point data communication with the remote  
10 computing device.

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12           **16.**    A data communication system as recited in claim 15, wherein the  
13 one or more multipoint network data communication components includes a data  
14 communication interface driver configured to communicatively link with a data  
15 communication interface of the remote computing device via the point-to-point  
16 data communication link.

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18           **17.**    A data communication system as recited in claim 15, wherein the  
19 one or more multipoint network data communication components includes a  
20 Remote Network Driver Interface Specification (NDIS) driver configured to  
21 communicatively link with a Remote NDIS component of the remote computing  
22 device via the point-to-point data communication link.

1       **18.**   A data communication system as recited in claim 15, wherein the  
2 one or more multipoint network data communication components includes a  
3 Remote Network Driver Interface Specification (NDIS) driver configured to  
4 communicate Remote NDIS messages with a Remote NDIS component of the  
5 remote computing device via the point-to-point data communication link.  
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7       **19.**   A data communication system as recited in claim 15, wherein the  
8 connection interface is a point-to-point data communication protocol interface.  
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10       **20.**   A data communication system as recited in claim 15, wherein the  
11 connection interface is a Universal Serial Bus data communication interface.  
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13       **21.**   A data communication system as recited in claim 15, wherein the  
14 connection interface is a 1394 bus data communication interface.  
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16       **22.**   A data communication system as recited in claim 15, wherein the  
17 connection interface is a wireless data communication interface.  
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19       **23.**   A data communication system as recited in claim 15, wherein the  
20 connection interface is a Bluetooth data communication interface.  
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22       **24.**   A data communication system as recited in claim 15, wherein the  
23 connection interface is an infrared data communication interface.  
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1           **25.**    A data communication system as recited in claim 15, wherein the  
2 one or more multipoint network data communication components includes a data  
3 communication interface driver and a virtual driver component, the data  
4 communication interface driver configured to communicate with the virtual driver  
5 component via a virtual network.  
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7           **26.**    A data communication system as recited in claim 15, wherein the  
8 one or more multipoint network data communication components includes a  
9 Remote Network Driver Interface Specification (NDIS) driver and a virtual driver  
10 component, the Remote NDIS driver configured to communicate with the virtual  
11 driver component via a virtual network.  
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13           **27.**    A data communication system as recited in claim 15, wherein the  
14 one or more multipoint network data communication components includes a  
15 Remote Network Driver Interface Specification (NDIS) driver and a virtual driver  
16 component, the Remote NDIS driver configured to communicate Remote NDIS  
17 messages with the virtual driver component via a virtual network.  
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1           **28.**     A data communication system as recited in claim 15, wherein the  
2 one or more multipoint network data communication components includes a data  
3 communication interface driver and a virtual driver component, the data  
4 communication interface driver configured to communicatively link with a data  
5 communication interface of the remote computing device via the point-to-point  
6 data communication link, and the data communication interface driver further  
7 configured to communicate with the virtual driver component via a virtual  
8 network.

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10           **29.**     A data communication system as recited in claim 15, wherein the  
11 one or more multipoint network data communication components includes a  
12 Remote Network Driver Interface Specification (NDIS) driver and a virtual driver  
13 component, the Remote NDIS driver configured to communicatively link with a  
14 Remote NDIS component of the remote computing device via the point-to-point  
15 data communication link, and the Remote NDIS driver further configured to  
16 communicate with the virtual driver component via a virtual network.

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18           **30.**     A data communication system as recited in claim 15, wherein the  
19 one or more multipoint network data communication components includes a  
20 Remote Network Driver Interface Specification (NDIS) driver and a virtual driver  
21 component, the Remote NDIS driver configured to communicate Remote NDIS  
22 messages with a Remote NDIS component of the remote computing device via the  
23 point-to-point data communication link, and the Remote NDIS driver further  
24 configured to communicate the Remote NDIS messages with the virtual driver  
25 component via a virtual network.



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2       **31.**    A data communication system configured to communicatively link a  
3 first device and a second device with a point-to-point data communication link, the  
4 point-to-point data communication link configured with multipoint network data  
5 communication components designed for data communication over a distributed  
6 network.

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8       **32.**    A method for implementing a point-to-point data communication  
9 link between computing devices, the method comprising:

10       providing a network communication component designed for data  
11 communication over a distributed network;

12       providing a connection interface to couple the network communication  
13 component with a host computing device; and

14       providing a virtual network to communicatively link the network  
15 communication component and a virtual driver component of a client computing  
16 device.

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18       **33.**    A method as recited in claim 32, wherein providing the network  
19 communication component includes providing a data communication interface  
20 driver to communicatively link with a data communication interface of the host  
21 computing device via the point-to-point data communication link.

1           **34.**    A method as recited in claim 32, wherein providing the network  
2 communication component includes providing a Remote Network Driver Interface  
3 Specification (NDIS) driver to communicatively link with a Remote NDIS  
4 component of the host computing device via the point-to-point data  
5 communication link.

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7           **35.**    A method as recited in claim 32, wherein providing the network  
8 communication component includes providing a Remote Network Driver Interface  
9 Specification (NDIS) driver to communicate Remote NDIS messages with a  
10 Remote NDIS component of the host computing device via the point-to-point data  
11 communication link.

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13           **36.**    A method as recited in claim 32, wherein providing the connection  
14 interface includes providing a point-to-point data communication protocol  
15 interface.

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17           **37.**    A method as recited in claim 32, wherein providing the connection  
18 interface includes providing a Universal Serial Bus data communication interface.

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20           **38.**    A method as recited in claim 32, wherein providing the connection  
21 interface includes providing a 1394 bus data communication interface.

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23           **39.**    A method as recited in claim 32, wherein providing the connection  
24 interface includes providing a wireless data communication interface.

1           **40.**    A method as recited in claim 32, wherein providing the connection  
2 interface includes providing a Bluetooth data communication interface.

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4           **41.**    A method as recited in claim 32, wherein providing the connection  
5 interface includes providing an infrared data communication interface.

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7           **42.**    A method as recited in claim 32, wherein providing the virtual  
8 network includes providing a virtual local area network.

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10          **43.**    A method as recited in claim 32, wherein providing the network  
11 communication component includes providing a Remote Network Driver Interface  
12 Specification (NDIS) driver, and wherein providing the virtual network includes  
13 providing a virtual local area network to communicate Remote NDIS messages  
14 between the Remote NDIS driver and the virtual driver component.

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16          **44.**    A method as recited in claim 32, wherein providing the network  
17 communication component includes providing a Remote Network Driver Interface  
18 Specification (NDIS) driver to communicate Remote NDIS messages with a  
19 Remote NDIS component of the host computing device via the point-to-point data  
20 communication link, and wherein providing the virtual network includes providing  
21 a virtual local area network to communicate the Remote NDIS messages between  
22 the Remote NDIS driver and the virtual driver component.

1           **45.**   A method for communicating data between a host device and a  
2 client device with a point-to-point data communication link, the client device  
3 performing the method comprising:

4           coupling to the host device with a connection interface to establish the  
5 point-to-point data communication link;

6           receiving data from a remotely located data communication interface; and

7           communicating the data from a data communication interface driver  
8 designed for data communication over a distributed network via a virtual network  
9 to a virtual driver component for the client device.

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11           **46.**   A method as recited in claim 45, wherein coupling with the  
12 connection interface includes coupling to the host device with a Universal Serial  
13 Bus data communication interface.

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15           **47.**   A method as recited in claim 45, wherein coupling with the  
16 connection interface includes coupling to the host device with a 1394 bus data  
17 communication interface.

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19           **48.**   A method as recited in claim 45, wherein coupling with the  
20 connection interface includes coupling to the host device with a wireless data  
21 communication interface.

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23           **49.**   A method as recited in claim 45, wherein coupling with the  
24 connection interface includes coupling to the host device with a Bluetooth data  
25 communication interface.

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2       **50.**   A method as recited in claim 45, wherein coupling with the  
3 connection interface includes coupling to the host device with an infrared data  
4 communication interface.

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6       **51.**   A method as recited in claim 45, wherein communicating includes  
7 communicating the data via a virtual local area network.

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9       **52.**   A method as recited in claim 45, wherein receiving includes  
10 receiving Remote Network Driver Interface Specification (NDIS) messages from a  
11 Remote NDIS component.

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13       **53.**   A method as recited in claim 45, wherein receiving includes  
14 receiving Remote Network Driver Interface Specification (NDIS) messages from a  
15 Remote NDIS component, and wherein communicating includes communicating  
16 the Remote NDIS messages from a Remote NDIS driver via the virtual network to  
17 the virtual driver component.

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19       **54.**   A method as recited in claim 45, wherein receiving includes  
20 receiving Remote Network Driver Interface Specification (NDIS) messages from a  
21 Remote NDIS component, and wherein communicating includes communicating  
22 the Remote NDIS messages from a Remote NDIS driver via a virtual local area  
23 network to the virtual driver component.  
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1       **55.** One or more computer-readable media comprising computer-  
2 executable instructions that, when executed, direct a computing system to perform  
3 the method of claim 45.

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5       **56.** A method for communicating data between a host device and one or  
6 more client devices with point-to-point data communication, the method  
7 comprising:

8       a first client device:

9               coupling to the host device with a first client device connection  
10 interface to establish a point-to-point data communication link between the  
11 host device and the first client device;

12              receiving Remote Network Driver Interface Specification (NDIS)  
13 messages from a Remote NDIS component of the host device;

14              communicating the Remote NDIS messages from a Remote NDIS  
15 driver designed for data communication over a distributed network via a  
16 virtual network to a virtual driver component for the first client device;

17       a second client device:

18              coupling to the host device with a second client device connection  
19 interface to establish a point-to-point data communication link between the  
20 host device and the second client device;

21              receiving the Remote NDIS messages from the Remote NDIS  
22 component of the host device; and

23              communicating the Remote NDIS messages from a Remote NDIS  
24 driver designed for data communication over a distributed network via a  
25 virtual network to a virtual driver component for the second client device.

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2       **57.**     A method as recited in claim 56, wherein coupling to the host device  
3 with a first client device connection interface and coupling to the host device with  
4 a second client device connection interface includes coupling to the host device  
5 with a Universal Serial Bus data communication interface.  
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7       **58.**     A method as recited in claim 56, wherein coupling to the host device  
8 with a first client device connection interface and coupling to the host device with  
9 a second client device connection interface includes coupling to the host device  
10 with a wireless data communication interface.  
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